Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (currently amended) ~~A spin-stand positioning system for positioning a transducer head at a desired position relative to a data storage disc rotating on a spindle subsystem, the positioning system~~ A spin-stand comprising:

a rotary actuator arm which supports a transducer head adjacent a data storage medium;

an encoder which determines an angular position of the actuator arm; and

a control circuit which translates the angular position from the encoder to a radial position of the head with respect to the medium.

~~a rotary micropositioning stage comprising a rotary actuator arm having an axis of rotation and supporting the transducer head relative to the data storage disc, a voice coil motor connected to the rotary actuator arm for positioning the rotary actuator arm in response to control current, and an encoder measuring an angular position of the rotary actuator arm;~~

~~a coarse positioning stage supporting the rotary micropositioning stage operable to position the transducer head at the desired position relative to the data storage disc, and~~

~~a position control subsystem connected to supply control current to the voice coil motor, wherein control current is conditional on the angular position measured by the encoder, to maintain the transducer head at the desired position relative to the data storage disc as the data storage disc rotates.~~

2. (currently amended) The spin-stand ~~positioning system~~ of claim 1 wherein the ~~voice coil motor is~~ actuator arm is rotated by a Halbach array voice coil motor.

3. (currently amended) The spin-stand ~~positioning system~~ of claim 1 ~~wherein the rotary micropositioning stage further comprises~~ further comprising:

a preamp board operably attached to the rotary actuator arm to amplify read signals received from the transducer head;

a mounting tool extending from the rotary actuator arm to support the transducer head on ~~an~~ a head gimbal assembly relative to the data storage disc; and

an encoder plate attached to the rotary actuator arm and being operably coupled to the encoder to determine the angular position of the rotary actuator arm.

Claim 4 (cancelled).

5. (currently amended) The spin-stand ~~positioning system~~ of claim 1 further comprising: a demodulator connected to the ~~preamplifier~~ preamp to generate from servo data read from the data storage ~~disc~~ medium a track identifier specifying an identified track on the ~~data storage disc~~ medium and a position error signal characterizing an offset of the transducer head relative to the identified track.

6. (currently amended) The spin-stand ~~positioning system~~ of claim 5 wherein the ~~position control subsystem further comprises: a processor adjusting~~ control circuit further

adjusts control current to ~~the voice coil motor~~ a motor coupled to the actuator arm in accordance with the position error signal, if the position error signal and track identifier are consistent with the angular position ~~measured~~ determined by the encoder.

7. (currently amended) The spin-stand ~~positioning system~~ of claim 5 wherein the ~~position control subsystem further comprises:a processor bypassing~~ control circuit further bypasses adjustment of control current to ~~the voice coil motor~~ a motor coupled to the actuator arm in accordance with the position error signal, if the position error signal and track identifier are not consistent with the angular position ~~measured~~ determined by the encoder.

8. (currently amended) The spin-stand ~~positioning system~~ of claim 5 wherein the ~~position control subsystem further comprises:a processor adjusting~~ control circuit further adjusts control current to ~~the voice coil motor~~ a motor coupled to the actuator arm in accordance with the angular position ~~measured~~ determined by the encoder, if the position error signal and track identifier ~~does~~ do not agree with the angular position.

9. The spin-stand ~~positioning system~~ of claim 1 wherein the ~~position control subsystem further comprises:a processor evaluating the position error signal, track identifier,~~ control circuit further evaluates servo data transduced by the head from a track on the medium and the angular position ~~measured~~ determined by the encoder to generate a position error signal adjustment parameter to redefine the track as substantially circular ~~on the data storage disc~~.

Claim 10 (cancelled).

11. (currently amended) A method ~~of positioning a transducer head at a desired position relative to a data storage disc rotating on a spindle subsystem, the transducer head being supported relative to the data storage disc by a rotary actuator arm, a voice coil motor rotating the rotary actuator arm, the method~~ comprising:

transducing servo data from a data storage medium using a transducer head supported adjacent the medium by a rotary actuator arm;

detecting an angular position of the actuator arm; and

bypassing adjustment of control current to a motor coupled to the actuator arm in accordance with the transduced servo data if said servo data are not consistent with the detected angular position of the actuator arm.

~~receiving position data specifying the desired position on the data storage disc;~~

~~detecting an angular position of the rotary actuator arm;~~

~~evaluating the detected angular position against the position data; and~~

~~adjusting control current applied to the voice coil motor to rotate the rotary actuator arm, based on the detected angular position of the rotary actuator arm, to position the transducer head at the desired position relative to the data storage disc as the data storage disc rotates.~~

Claims 12-16 (cancelled).

17. (currently amended) The method of claim ~~1~~ 11 wherein the transducing step comprises transducing the servo data from a track on the medium, and wherein the method further comprises evaluating the servo data and detected angular position to generate a position error signal adjustment parameter, thereby redefining the track as substantially circular. ~~further comprising:~~

~~detecting servo data from the data storage disc; and~~

~~evaluating the servo data and detected angular position to generate a position error signal adjustment parameter, thereby redefining the track as more circular on the data storage disc.~~

Claim 18 (cancelled).

19. (currently amended) The method of claim ~~1~~ 11 further comprising~~: detecting servo data from the data storage disc; and~~ adjusting control current to the ~~voice coil~~ motor in accordance with the detected angular position, if the servo data ~~is~~ are not consistent with the detected angular position.

Claims 20-24 (cancelled).

25. (new) The method of claim 11 further comprising translating the detected angular position to a radial position of the head with respect to the medium.

26. (new) The method of claim 11 wherein the motor of the bypassing step is characterized as a Halbach array voice coil motor.

27. (new) The method of claim 11 wherein the transducing step comprises generating, from the servo data, a track identifier specifying an identified track on the medium and a position error signal characterizing an offset of the transducer head relative to the identified track.

28. (new) The method of claim 11 further comprising adjusting control current to the motor in accordance with the transduced servo data, if the transduced servo data are consistent with the detected angular position of the actuator arm.

29. (new) A spin-stand comprising a rotary actuator arm which supports a transducer head adjacent a data storage medium, and a Halbach array voice coil motor configured to move the actuator arm with respect to the medium.

30. (new) The spin-stand of claim 29, further comprising an encoder which determines an angular position of the actuator arm.

31. (new) The spin-stand of claim 30, further comprising a control circuit which selectively applies control current to the motor to position the transducer head adjacent the medium in relation to the determined angular position and servo data transduced by the head from the medium.

32. (new) The spin-stand of claim 31, wherein the control circuit further generates a position error signal adjustment parameter in relation to the determined angular position and the transduced servo data to define a substantially circular track on the medium.